12 SEP 1978

MEMORANDUM FOR: Deputy Director for National Foreign Assessment

FROM: Director of Central Intelligence

SUBJECT: Proceedings Article, "A Surface Navy for Today's Threat," by Worth Bagley

1. Attached is a copy of an article from the Naval Institute Proceedings by Admiral Worth Bagley. In it the Admiral avers that Soviet tactics dictate the simultaneous use of submarines, surface ships and land-based air in attacking US Naval formations, pointing out that the Soviets have accepted an inferior submarine capability on the grounds that it will always be operating in concert with surface and air forces. I recall that Gorshkov has written some about the interdependence of submarine, surface and air forces. Do we have any evidence that in training exercises the Soviets do practice a coordinated submarine-surface-air tactic?

2. Beyond that, do you generally concur with or take exception to the points the Admiral raises in his article?

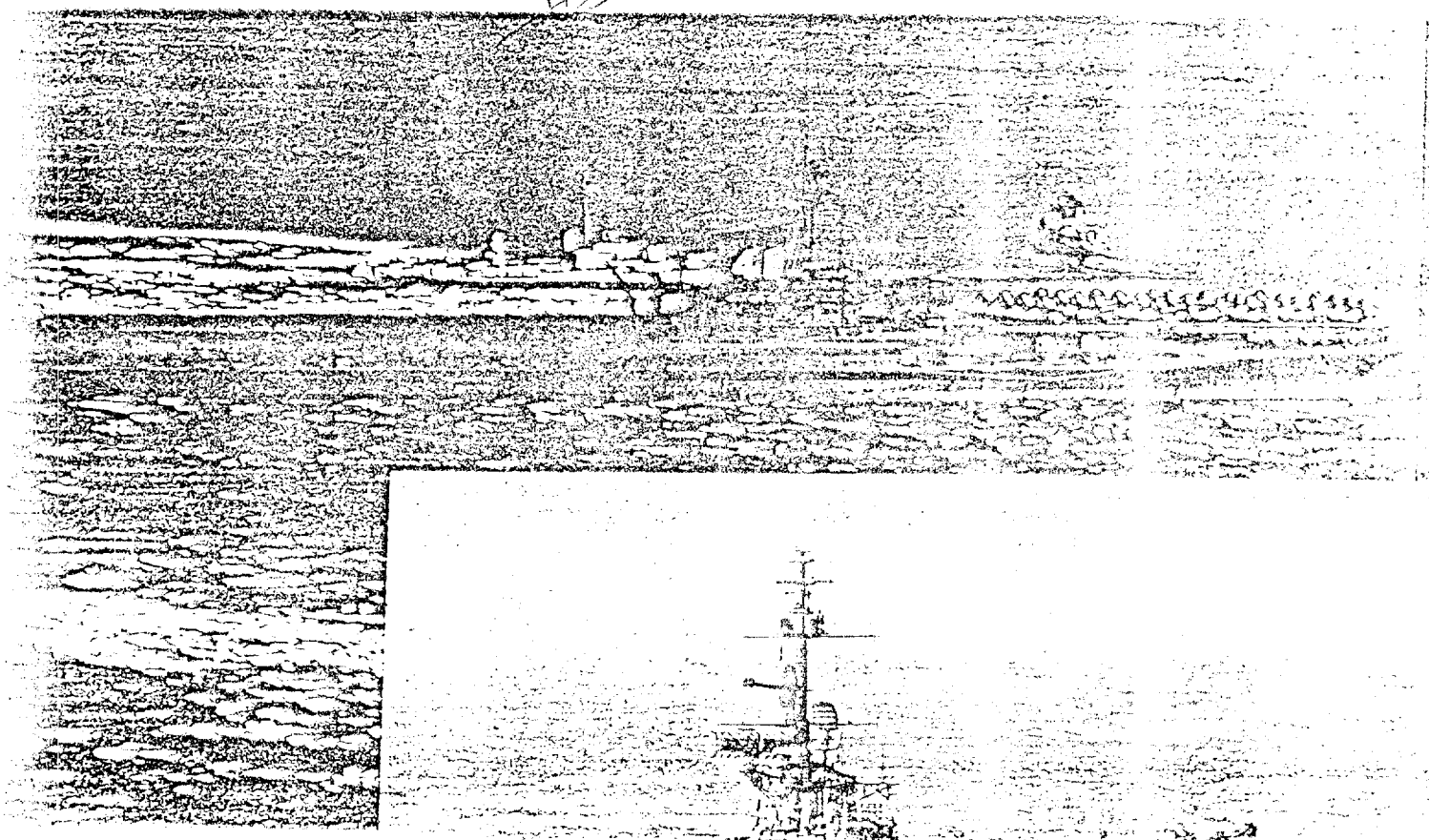
25X1

STANSFIELD TURNER

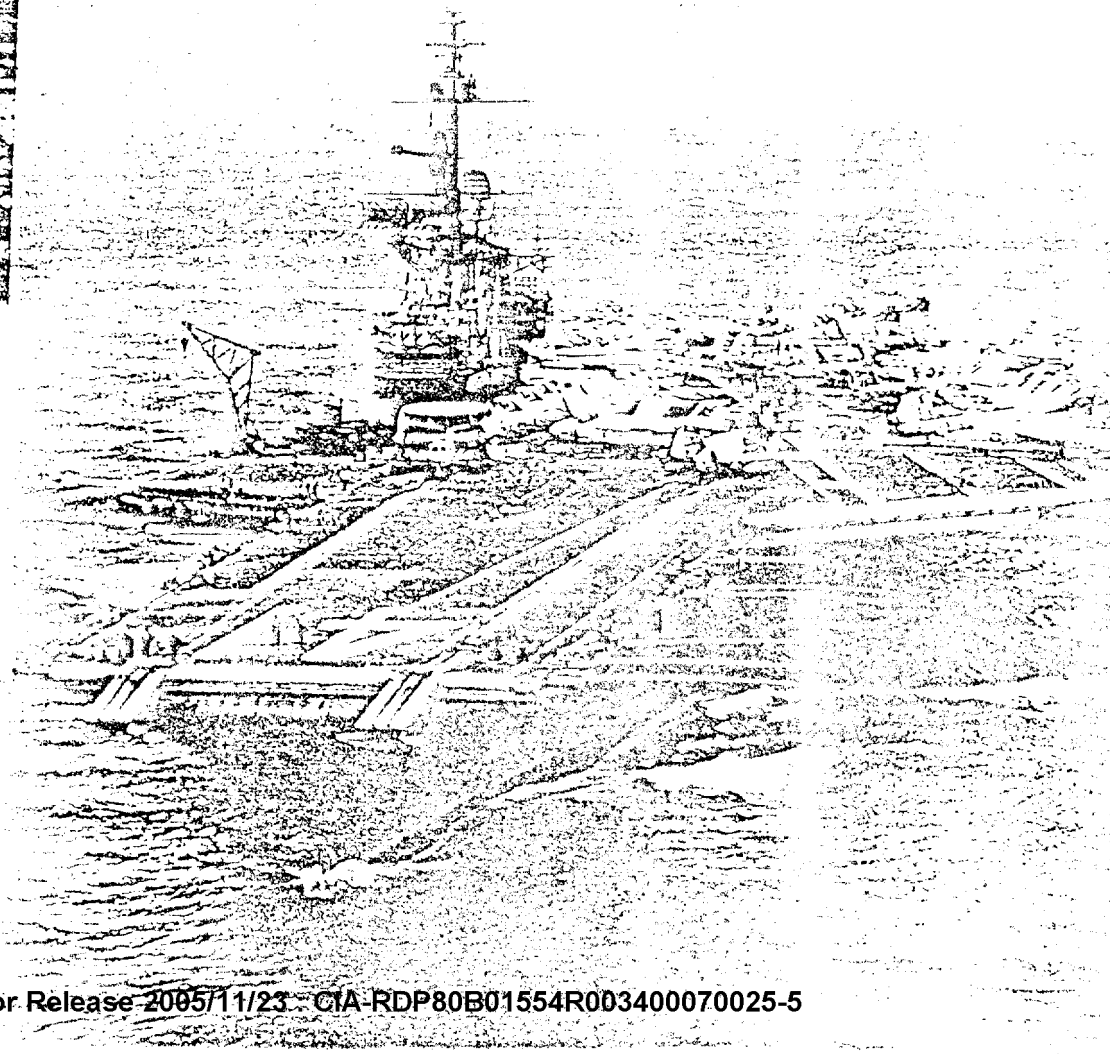
Attachment

A Surface Navy for Today's Threat

By Worth H. Bagley



USS Midway (CVB-41) off the coast of Labrador in March 1946



USS Midway (CVA-41) under way off Vietnam in 1971

ALL PHOTOS U. S. NAVY

USS Midway *(CVA-41) operating with the Seventh Fleet in*

The USS Midway *(CVB/CVA/CV-41), commissioned in 1945, continues in service today. She illustrates the longevity of the carriers' primacy which has relegated to a secondary role the surface combatants which once held sway. Just as they appear small in these pictures, destroyer-type ships have been forced into the task of defending the carriers which have the big job. But the assumptions of 1945 are out of date, and so also is the idea that surface combatants should remain always on the defensive.*

The Context of Naval Surface Warfare: At the outset, it can be said that naval surface warfare bears little resemblance to that suggested by the common currency in terms. It is not a type command organization that brings together surface combatant ships for efficient administration of resources. It is not the instrument of a Washington bureaucracy whose imagination is inhibited by arbitrary program compartmentation, policy compromises, and imposed horse-trading. It is not the only source of authority on the oceans' surfaces because air warfare and submarine warfare are not pertinent without like objectives of authority. Because it lacks the capabilities to operate offensively, it is not a pure professional specialty. And, finally, for all these reasons, it is not an active combat doctrine. But these conditions, negative as they are, have grown deliberately from the U. S. naval policy decisions of 1945 which have given enhanced roles to aircraft carriers and submarines and transformed surface warships into essentially defensive vessels.

In a strategic context, on the other hand, there rests a crucial role for naval surface warfare forces. By the nature of man's existence, wars are decisive only through their influence upon conditions on land. From the territorial perspective, the enemy is either overrun or his frontiers breached for some limited purpose. A like principle can be said to prevail at sea. Power is relevant only as it permits or denies nations the use of the ocean surfaces that affect their commerce or security. History, as we have known it, gives an enduring role to the soldier on the ground and the ship that sails on the seas because survival depended on ascendancy on both land and sea.

It is for this strategic goal of sea control that the aircraft carrier and the submarine have assumed importance. If their capabilities were not influential in deciding who controlled the surface of the seas, their

their existence would have no purpose. Accordingly, in examining the state and future of naval surface combatant ships—as well as carriers and submarines—the proper warfare measures, or hypotheses, should revolve around use of the surface of the seas:

- Naval surface ships must be survivable in war or no friendly commercial ship can be assumed survivable.
- The effectiveness of any single unit of naval power should be measured by its contribution, per dollar expended, to the survivability of naval and merchant surface ships.
- The less self-sufficient the naval surface ship, the greater the cost for her survivability.
- Since the objective of using the seas for commerce is to maintain oceanic links among the continents, survivability of ships is a strategic rather than tactical matter, and offensive rather than defensive.
- If, in the last analysis, wars are decisive only by influencing conditions on land, naval power inevitably will clash with forces on land as the two interact, affecting the the vulnerabilities of each and influencing the choices in war available in either environment. Thus, forces at sea should be sustainable in the face of threats from the land and, in turn, pose threats to forces on land, their supporting infrastructure, and other territorial vitals.

Evaluation of the Risks Accepted in 1945: If there is to be a rational determination of the forces that best meet these criteria, one should summarize the events of the past three decades as they affect the risks accepted by naval policymakers in 1945 when they established postwar force levels and relegated surface warships to an essentially defensive role.

One postwar premise was that there would be no new threat at sea. Instead, a large, modern, and capable Soviet Navy has materialized. Its concepts of operation are designed to confound the principles on which the American Navy was structured in 1945. A multiple-threat Soviet force—comprised of surface ships, submarines, and land-based naval bombers—is armed with cruise missiles of varied ranges. These missiles can reach a maximum of 450 miles, following low and high flight profiles that are designed to avoid or delay in-flight detection and reduce reaction time for the defense. The launching of these weapons would be coordinated so that the weight of attack would be sufficient to saturate defenses. By placing these standoff weapons in three environments—the surface of the oceans, underseas, and in the air—the Soviets altered the calculus of combat at sea, shifting the premium from tactical defense to strategic offense. A redundant and broad oceanic surveillance system was accorded a high priority so that indications of hostile naval forces could be obtained before those forces reached threatening positions. The Soviet purpose is to use that information for the positioning and deployment of naval units for preemptive attack in strength sufficient for local superiority. An enemy, relying on a few strong tactical ship groupings, is left with the alternative of preempting the Soviet attack if its own ships are to survive and carry out its missions. In the cycle the Soviets have designed, the task for the enemy requires long-range determination of Soviet ship and submarine locations, knowledge of what airfields the land-based naval bombers are using, and a range and variety of weapon systems that can blunt the gathering and tightly coordinated Soviet attack before it is launched.

Soviet doctrine has its own premises, the most important of which are strategic flexibility and the neutralization of American technological advantages.

In the first instance, the goals are the safe deployment of Soviet forces from generally constricted areas of access to the oceans and the availability of overseas bases—contingency arrangements suffice—for naval bombers. Ships and submarines are kept continually deployed, a base on the open seas was developed at Petropavlosk, and admission to ports and airfields in the Third World is a major preoccupation of Moscow's foreign policies. Any *one* foreign base defines the threshold between the viability or infeasibility of the Soviets' doctrine for seapower. Their diplomatic successes thus far go well beyond the minimum. In crisis or for training, naval land-based aircraft operate frequently from Cuba, Guinea, and Angola; a base and airfield complex is established in Somalia; and a lineup of other overseas base access arrangements is in various stages of use or potential use.

For the second premise, neutralizing American technological advantage, the Soviets are most concerned with naval systems that outrange the carrier-based aircraft and defensive weapons of American tactical formations and with the superior quieting of U.S. nuclear submarines relative to their own. By exploiting the less constrained design characteristics of land-based aircraft, Soviet naval reconnaissance aircraft and bombers have operating radii some six or seven times the radii of carrier-based aircraft. Antiship cruise missiles may be launched from the air at ranges close to the outer edge of carrier task group air surveillance and defense envelopes and, from the surface or underseas, at ranges that reduce the probability of detection prior to launch.

Against quiet American submarines, the evidence

suggests Moscow has no intention of competing head-on, voluntarily accommodating American tactical perceptions of submarine versus submarine. Construction of Soviet nuclear-powered attack submarines designed for antisubmarine missions has been curtailed as Moscow explores technologies and operating procedures. The Soviet submarine force (other than those vessels armed with ballistic missiles) is primarily oriented as an antiship missile weapon system, on an equal basis with missile-equipped surface ships and land-based aircraft. Cruise-missile submarines operate in close coordination with these other units, tasked for the multiple attack that is designed to saturate the enemy's defenses. For this purpose, the Soviets require that guided-missile submarines be positioned in the proximity of surface ships. Protection of ships and submarines against American nuclear-powered attack submarines is a mutually shared responsibility not unlike that of an aircraft carrier and her supporting ships. The Soviet surface ship is not so proficient as the Soviet submarine in acoustic detection of other submarines, and because the submarine is inferior in this regard to U.S. attack submarines, integrated ship-submarine (and, often, air) operations permit all aspects of surveillance and mutual protection to be exploited. If, nevertheless, an enemy submarine chooses to attack a Soviet surface ship, her position will be revealed by the weapon launch, and other ships can conduct counterattacks. The strength of surface ship attack groups, concentrated against known targets, is designed to accept this contingency. Along with expanded numbers of maritime aircraft, the priority and form the Soviets give antisubmarine defense provides them about seven ships, submarines, or aircrafts of varied types for every U.S. attack submarine, a ratio that in 1968 was only three to one. The Soviets' antisubmarine warfare (ASW) surface ships outnumber their ASW submarines by a proportion of six to one, and surface ships and helicopters comprise some 70% of the total Soviet ASW capability. By contrast, there are only two U.S. ships or aircraft for every Soviet attack and cruise-missile submarine, and the ratio of American surface ASW ships to ASW submarines is two to one.

Another premise the U.S. planners of 1945 used in structuring the Navy was that there would be limited technological improvements in oceanic surveillance and naval standoff weaponry. Oceanic surveillance—compared with the radio intercept, radar, and difficult aircraft search procedures of the early 1940s—is now an elaborate system of passive and active detection sensors. Advanced technology permits wide-area surveillance from above and beneath the seas. While locating naval forces at sea in 1945 was a tactical proposition, in the 1970s, satellites, passive sonar arrays, and communications intercept complexes gather strategic information. The overall system is so effective that it operates independently of the naval combat unit. In conjunction with the fact that long-range weapon systems have leapfrogged beyond local means for target acquisition, carrier-based aircraft no longer satisfy the evolving naval surveillance requirement. If ships are to avoid surprise or acquire targets for weapons now available, more often than not, external, strategically oriented surveillance information will be mandatory. We are close to the time when enemy knowledge of ship presence must be assumed. Naval warfare will be occupied with masking the identity of combat units. There will be a critical premium on more numerous threatening units and on cover and deception. By such actions, the enemy is denied the knowledge of hostile force identification, information essential for concentration and economical use of its attack forces.

But, if strategic area oceanic surveillance is narrowing the options for naval power, the postulated response of proliferating ship targets will be effective only if those additional ships pose a threat to an enemy's naval units and land facilities. Advances in weapon technology make it possible now to fit long-range, highly accurate cruise missiles into small ships (i.e., frigates, destroyers, hydrofoils, and surface effect ships). Microelectronic circuits are being progressively perfected, matching complex signal processing to small, reliable devices. Conventional warhead improvements, applied to shaped charges, will give great penetration per weight of high explosive. Launching these weapons from ships offers the space that exploits these modern technologies against sea and land targets, avoiding configuration limits in attack aircraft and in submarine torpedo tubes that penalize warhead choice and weapon ranges.

A decline in the size of the U.S. Navy to about half its numerical strength in the 1950s and 1960s has affected adversely the capability to carry out any mission in the face of the increasing Soviet naval threat. Reductions in the number of carriers ease the Soviet surveillance and attack doctrine that depends on early location and concentrated local force superiority. A larger proportion of American surface combatants has been allocated as a means of offsetting the greater carrier vulnerability. These ships were designed in size and propulsion plant (and usually in armament) specifically to move with and defend the carrier. As surface combatant ship construction patterns and mission orientation are so limited, the high costs and narrow purpose of those ships pre-

vent alternative procurements and uses. At equal cost, three to seven other ships can be built, suitable for sea control in three oceans or for new forms of power projection. These alternative surface combatants, smaller because advanced weapon systems require less space, would permit proliferating the offensive threat to Soviet naval power and land infrastructure, achieving—in another way—enhanced carrier survivability. Lacking the decision to pursue these new opportunities, the consequence is a steadily degrading American naval capability. Rather than looking ahead, the decision-maker persists in the continuation of policies decided in 1945 though all or most of the conditions on which the decisions were based no longer prevail.

By these constraints on new policies, the credibility of naval control over the surface of the seas has moved from the obvious deficiencies of carriers and surface combatant ships to the perceived capabilities of nuclear-powered attack submarines. But, in the meantime, the Soviets have pursued as a key doctrine of seapower the neutralization of submarine effectiveness through the use of multi-platform attack procedures. For the reasons briefly described earlier in this article, the Soviets do not operate their guided-missile submarines in the mirror image of the quiet, independently operating American attack submarine. If an antiship Soviet submarine is a to be attacked by an American submarine, the latter must deal first with Soviet surface combatant ships whose positions and operations are highly coordinated with those of the Soviet cruise-missile submarine. If the U.S. submarine fires a Harpoon missile or torpedo at a Soviet naval ship, a cycle of Soviet surface counterattack is started. That Soviet option may explain the Soviet long-range ASW cruise missile which exceeds expected ship sonar detection ranges and could be launched solely on the indication of hostile submarine weapon firing.

In any case, reliance on the attack submarine as a substitute for surface forces whose credibility has not kept pace with changing conditions of naval warfare violates the first postulated principle in the use of the oceans' surface. If naval surface ships are not survivable in war—in the sense of a net advantage relative to the enemy—then no friendly commercial ship can be assumed to be survivable. The other hypotheses that measure effectiveness in the use of the seas should now be considered, taking into account the preceding discussion.

▶ *The measure of output per resources expended:* It is argued in this article that survival of American surface ships at sea, against the Soviet Navy, depends on early detection of Soviet naval units; the introduction of doubt on the identity and priority of the threat so the Soviet commitment to attack is delayed despite surveillance indications of American ship presence; and long-range, preemptive American attack against the multiple Soviet platforms.

In the case of detection, the U.S. forces would have to rely on land-oriented surveillance to confirm Soviet land-based naval aircraft deployments to overseas bases and on available oceanic surveillance to locate the coordinated groups of ships and submarines. This process necessarily will be strategic in scope, operating, for the most part, independently of ships which will use the information. For the purpose of creating Soviet doubt in the identity and priority of the threat at sea, additional combatant ship targets are required with both power projection and sea control capabilities. While the carrier and attack submarine are being adapted to these dual missions, key deficiencies prevail as set forth above. In addition, the carrier's high cost has curtailed numerical strength, and the submarine neither satisfies the multiplication of surface targets required to improve ship survivability nor does her design for increasingly irrelevant *sophisticated* antisubmarine warfare keep her within current fiscal constraints.

The surface combatant ship of frigate or destroyer size, however, offers a lower investment cost and can accommodate a nonnuclear land-targer cruise missile of greater firing range and a passive towed sonar array of greater submarine detection range than in any other naval unit. Such a surface combatant thus should be superior in launching a preemptive attack against Soviet ships, submarines, and land-based aircraft, with two important implications:

First, as long as the air, submarine, and surface combatant units of the Soviet conventional naval forces operate in close coordination (following the Soviet penchant for redundancy, mutual support, and overwhelming mass), the breaking up of the land-based aircraft part of the force at its base is essential if the unique weight of carrier-based tactical aircraft attack is to be committed with a credible prospect of carrier survivability.

Second, the existing American surface combatant ship, fitted with the land-target cruise missile and passive sonar array offers the dual mission at one-tenth to one-twentieth the cost of the carrier and her embarked aircraft, and it is some 25-50% less costly than the attack submarine. As life-cycle costs are considered, the ratios in both comparisons widen even further.

▶ *Self-sufficiency:* The increasing dedication of ship resources for carrier defense has been described. The expansion possibilities for surface combatant ships

promise a degree of independent operations not known for many decades. Low procurement and operating costs give an affordable loss versus value relationship. Standoff weapons supported by integral means of surveillance promise a ship-target attack capability at ranges one-half or more that feasible with tactical aircraft. Access to external strategically oriented surveillance information permits firing of land-target, nonnuclear cruise missiles at long ranges, taking on strategic influence.

Independent as these ships will become in comparison with the worn-out precedents of the past, their usefulness will continue to serve some of those past purposes. Proliferating numbers of these ships increase carrier survivability, by degrading the Soviet land-based air threat at long range and by expanding the breadth and priority of threat with which the Soviets must deal. But, the new capabilities in surface combatant ships offer a self-sufficiency advantage that greatly exceeds that of the carrier and the supporting ships she will require commensurate with her shorter-range weapon systems and higher relative value.

▶ *Strategic scope:* As high officials in the Defense Department have said, a single ship can be in only one place at a time. If the United States is to use sealanes linking North America to allies in the North Atlantic, Mediterranean, and East Asia, and if it is to assume the safe transit of oil and other raw materials from the Middle East, Africa, Asia, and South America, the war at sea becomes highly strategic. Technological advances in surveillance and weaponry facilitate that approach by early indications of enemy units and a standoff capability to preempt attack. Where, recently, defense experts have claimed that the lack of carriers would prevent control of distant seas, the prospect of a rejuvenated surface combatant ship offers a viable and, in many respects, improved means for control of vital sea lines of communication. For the first time, moreover, naval ships protecting merchant shipping in a tactical area will possess concurrently the capability of striking an enemy's territory or its overseas bases from long range as a deterrent to, or in retaliation of, hostile naval attacks against commercial ships.

▶ *Land-Sea Interaction:* This same principle of a seaborne threat to land targets offers a new strategic role for naval power. Dispersed on all the oceans, the dictate of ship survivability as well as use of seas for the protection of vital interests, the combination of newly armed surface combatant ships and the heavyweight attack of carrier aircraft can threaten the Soviet Union along its entire periphery. If Moscow believes land-boun[illegible]

acceptable for aggression in the NATO region or in the Middle East, it must in this case consider its vulnerabilities elsewhere to the projection of power from the sea. If the Soviet Union believes it can attack the NATO center with conventional arms and be assured the West will place all its conventional resources there to hold off the need for nuclear escalation, the naval power envisioned in this paper would cause the Soviets first to decide how to cope with the inevitable conventional power projection that can reach other areas of Soviet concern. And finally, in crisis, the surface combatant ship equipped with a conventional-warhead land-target cruise missile gives the West a credible way to deploy the option of power in any area of prospective issue without premature display of nuclear arms. As time goes on, the separation of conventional and nuclear forces during a U.S.-U.S.S.R. confrontation promises to be of increasing importance—not only to dampen crisis, but to give believability to the Western deployment of power.

Conclusions: In some 30 years, the factors of experience and judgment that in 1945 gave preference to the aircraft carrier have changed perceptibly. Opposing naval power has taken a threatening form, and technology has resumed its inevitable cycles much as earlier in the century the aircraft led to the demise of the battleship. But transitions are evolutionary, as they were in the 1920s and 1930s. There is not now the relatively unlimited bag of wartime resources from which aircraft carriers were pulled in the 1940s and battleships soon discarded. Smaller ships, revolutionary weapons, and strategic surveillance on, over, and under the seas are clearly the wave of the future for naval power. But, with fiscal constraints, the first task is to proceed far enough so that the credibility of a large investment in carriers is restored. Surface combatant ships, those that exist and classes under construction, properly armed and equipped, offer that opportunity. Given the will to examine these possibilities, and the open-mindedness of a bygone battleship Navy that accepted the aircraft carrier, the next decade should be the blast-off phase for the surface combatant ship. No other course seems now to be more in the national interest.

Worth H. Bagley served in the U.S. Navy in various sea and shore assignments until his retirement from active duty in 1975. He was a visiting fellow at the International Institute of Strategic Studies in London in 1976 and Bates Fellow at the U.S. Naval War College in 1977. Since 1976, he has been president of ServAll Ltd., a firm whose headquarters are in San Diego,

The Director of Central Intelligence
Washington, D.C. 20505

12 September 1978

Dear Dr. Tarson,

Thank you so much for inviting me to be commencement speaker at National University's Summer Graduation Exercises next July. I am also honored that the Board of Trustees has seen fit to bestow an honorary degree on me.

Normally, I would accept an honor of this sort without a moment's hesitation. However, I hesitate to commit myself so far in advance since the uncertainties of scheduling conflicts could prevent my attending. I realize, of course, your need to firm up the program as soon as possible. With this in mind, might I delay giving you a definite answer until next spring?

If this is acceptable, my staff will be in touch with your office in early spring. Again, many thanks for your most thoughtful consideration.

Yours sincerely,

STANSFIELD TURNER

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T-1 Apr

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